

## IN THE CLAIMS

Please amend the claims as follows:

### AMENDMENTS TO THE CLAIMS

1. (Currently amended) Apparatus for mobile communication, comprising:
  - a switch, having a plurality of ports for connection to a wired local area network (LAN);
  - a plurality of access points, which are arranged in a wireless local area network (WLAN) to communicate over the air in accordance with a predefined WLAN protocol on a common frequency channel with a mobile station using a common basic service set identification (BSSID) for all the access points, and which are coupled by the LAN to the switch so that upon receiving at one or more of the access points an uplink ~~signal~~ packet transmitted over the WLAN by the mobile station on the common frequency channel, the one or more of the access points convey messages responsively to the uplink ~~signal~~ packet over the LAN to the switch; and
  - a manager node, which is coupled to the switch so as to receive the messages and is adapted to process the messages so as to select one of the access points to respond to the uplink ~~signal~~ packet, and to send an instruction via the switch to the selected one of the access points to transmit ~~a response~~ to the mobile station a response to the uplink packet within a time limit specified by the WLAN protocol.
2. (Original) The apparatus according to claim 1, wherein the access points have respective service areas, and are arranged so that the service areas substantially overlap.
3. (Original) The apparatus according to claim 1, wherein the access points are configured to communicate with the mobile station substantially in accordance with IEEE Standard 802.11.
4. (Original) The apparatus according to claim 1, wherein the LAN is an Ethernet LAN.
5. (Original) The apparatus according to claim 1, wherein the LAN is characterized by a data transmission rate of at least 1 Gbps.
6. (Original) The apparatus according to claim 1, wherein the LAN is characterized by a data transmission rate that is substantially less than 1 Gbps.
7. (Original) The apparatus according to claim 1, wherein the manager node has an address on the LAN, and wherein the access points are adapted to convey the messages over the LAN in the form of data frames directed to the address of the manager node.

8. (Original) The apparatus according to claim 7, wherein the access points are configured to communicate over the LAN exclusively with the manager node.

9. (Currently amended) The apparatus according to claim 7, wherein the access points ~~are adapted to receive~~ uplink packet comprises an uplink data packet ~~sent by the mobile station using the uplink signal,~~ and wherein the access points are configured to fragment the uplink data packet among a succession of the data frames for conveyance over the LAN via the switch to the manager node.

10. (Original) The apparatus according to claim 9, wherein the access points are operative to fragment the uplink data packet so that the data frames have a length that is no more than 10% of a maximum frame length permitted on the LAN.

11. (Original) The apparatus according to claim 9, wherein the access points are operative to fragment the uplink data packet so that the data frames have a length that is equal to a minimum frame length permitted on the LAN.

12. (Original) The apparatus according to claim 9, wherein the uplink data packet comprises a destination address, and wherein the manager node is adapted to reassemble the uplink data packet from the succession of the data frames, and to convey the reassembled packet via the switch over the LAN to the destination address.

13. (Original) The apparatus according to claim 12, wherein the manager node is connected to first and second ports among the plurality of the ports of the switch, and is configured to receive the data frames from the access points through the first port and to convey the reassembled packet to the LAN via the second port.

14. (Original) The apparatus according to claim 13, wherein the manager node is further configured to receive a downlink data packet from the LAN via the second port, and to fragment the downlink data packet into a further succession of the data frames and to convey the further succession of the data frames via the first port to the selected one of the access points, which is operative to reassemble the downlink data packet for transmission over the WLAN to the mobile station.

15. (Original) The apparatus according to claim 9, wherein the address of the manager node on the LAN comprises a Layer 3 address, and wherein each of the

succession of the data frames among which the uplink data packet is fragmented comprises a Layer 3 encapsulating packet, having a destination address corresponding to the Layer 3 address of the manager node.

16. (Currently amended) The apparatus according to claim 1, wherein the messages conveyed by the access points responsively to the uplink ~~signal~~ packet comprise an indication of a strength of ~~the~~ an uplink signal, conveying the uplink packet, received respectively by each of the one or more of the access points, and wherein the manager node is adapted to select, responsively to the indication and prior to receiving the messages from all of the one or more of the access points, the one of the access points to respond to the uplink ~~signal~~ packet.

17. (Original) The apparatus according to claim 16, wherein the access points are adapted to set, responsively to the strength of the uplink signal, a priority indicator in the messages to be conveyed over the LAN so as to cause the switch to deliver a first message indicating a strong uplink signal before delivering a second message indicating a weak uplink signal.

18. (Original) The apparatus according to claim 16, wherein the access points are adapted, responsively to the strength of the uplink signal, to delay transmission of some of the messages over the LAN, so that a first message indicating a strong uplink signal is transmitted with a smaller delay than a second message indicating a weak uplink signal.

19. (Currently amended) Apparatus for mobile communication, comprising:  
a switch, having a plurality of ports for connection to a wired local area network (LAN);  
a plurality of access points, which are arranged in a wireless local area network (WLAN) to communicate over the air with a mobile station, and which are coupled by the LAN to the switch so that upon receiving at one or more of the access points an uplink message transmitted over the WLAN by the mobile station, the one or more of the access points convey the uplink message over the LAN to the switch; and  
a manager node, which is connected to first and second ports among the plurality of the ports of the switch, and is configured to receive ~~the uplink messages~~ from the access points exclusively through the first port and to convey the uplink messages exclusively via the second port over the LAN to a respective destination addresses of the message.

20. (Original) The apparatus according to claim 19, wherein the access points are configured to communicate over the LAN exclusively with the manager node via the first port in response to uplink messages received from the mobile station.

21. (Original) The apparatus according to claim 19, wherein the access points are configured to communicate with the mobile station substantially in accordance with IEEE Standard 802.11.

22. (Original) The apparatus according to claim 19, wherein the manager node has first and second addresses on the LAN, which are respectively associated with the first and second ports, and wherein the access points are adapted to convey the uplink message over the LAN in the form of data frames directed to the first address.

23. (Original) The apparatus according to claim 22, wherein the uplink message comprises a data packet, and wherein the access points are adapted to fragment the uplink data packet among a succession of the data frames for conveyance over the LAN to the first address, and wherein the manager node is adapted to reassemble the data packet from the succession of the data frames, and to convey the reassembled data packet via the second port over the LAN to the destination address, using the second address as a source address.

24. (Original) The apparatus according to claim 23, wherein the access points are operative to fragment the data packet so that the data frames have a length that is no more than 10% of a maximum frame length permitted on the LAN.

25. (Original) The apparatus according to claim 23, wherein the access points are operative to fragment the data packet so that the data frames have a length that is equal to a minimum frame length permitted on the LAN.

26. (Original) The apparatus according to claim 23, wherein the address of the manager node on the LAN comprises a Layer 3 address, and wherein each of the succession of the data frames among which the uplink data packet is fragmented comprises a Layer 3 encapsulating packet, which is addressed to the Layer 3 address of the manager node.

27. (Original) The apparatus according to claim 19, wherein the manager node is further configured to receive a downlink message from the LAN via the second port, and to convey the downlink message via the first port to one of the access points, which is operative to transmit the downlink message over the WLAN to the mobile station.

28. (Currently amended) A method for mobile communication, comprising:

arranging a plurality of access points in a wireless local area network (WLAN) to communicate over the air with a mobile station in accordance with a predefined WLAN protocol using a common basic service set identification (BSSID) for all the access points;

receiving at one or more of the access points an uplink signal packet transmitted over the WLAN by the mobile station using the common BSSID;

conveying messages responsively to the uplink signal packet from the one or more of the access points over a wired local area network (LAN) linking the access points to a manager node;

processing the messages at the manager node so as to select one of the access points to respond to the uplink signal packet, and conveying a response instruction from the manager node to the selected one of the access points; and

transmitting ~~a response~~ from the selected one of the access points to the mobile station responsively to the response instruction a response to the uplink packet within a time limit specified by the WLAN protocol.

29. (Original) The method according to claim 28, wherein the access points have respective service areas, and wherein arranging the plurality of the access points comprises arranging the access points so that the service areas substantially overlap.

30. (Original) The method according to claim 28, wherein arranging the plurality of the access points comprises arranging the access points to communicate with the mobile station substantially in accordance with IEEE Standard 802.11.

31. (Original) The method according to claim 28, wherein the LAN is an Ethernet LAN.

32. (Original) The method according to claim 31, wherein conveying the messages comprises sending the messages over the Ethernet LAN at a data transmission rate of at least 1 Gbps.

33. (Original) The method according to claim 31, wherein conveying the messages comprises sending the messages over the Ethernet LAN at a data transmission rate that is substantially less than 1 Gbps.

34. (Original) The method according to claim 28, wherein the manager node has an address on the LAN, and wherein conveying the messages comprises transmitting the messages over the LAN in the form of data frames directed to the address of the manager node.

35. (Original) The method according to claim 34, wherein the access points are configured to communicate over the LAN exclusively with the manager node.

36. (Currently amended) The method according to claim 34, wherein receiving the uplink ~~signal~~ packet comprises receiving an uplink data packet sent by the mobile station, and wherein transmitting the messages comprises fragmenting the uplink data packet among a succession of the data frames for conveyance over the LAN via the switch to the manager node.

37. (Original) The method according to claim 36, wherein fragmenting the uplink data packet comprises generating the data frames with a length that is no more than 10% of a maximum frame length permitted on the LAN.

38. (Original) The method according to claim 36, wherein fragmenting the uplink data packet comprises generating the data frames with a length that is equal to a minimum frame length permitted on the LAN.

39. (Original) The method according to claim 36, wherein the uplink data packet comprises a destination address, and comprising reassembling the uplink data packet at the manager node from the succession of the data frames, and conveying the reassembled packet over the LAN to the destination address.

40. (Original) The method according to claim 39, wherein the LAN comprises a switch, and the manager node is connected to first and second ports of the switch, and wherein transmitting the messages comprises transmitting the data frames from the access points through the first port to the manager node, and wherein conveying the reassembled packet comprises transmitting the reassembled packet to the LAN via the second port.

41. (Original) The method according to claim 40, and comprising:

receiving at the manager node a downlink data packet from the LAN via the second port;  
fragmenting the downlink data packet into a further succession of the data frames;  
conveying the further succession of the data frames via the first port to the selected one of the access points; and  
reassembling the downlink data packet at the selected one of the access points for transmission over the WLAN to the mobile station.

42. (Original) The method according to claim 36, wherein the address of the manager node on the LAN comprises a Layer 3 address, and wherein each of the succession of the data frames among which the uplink data packet is fragmented comprises a Layer 3 encapsulating packet, having a destination address corresponding to the Layer 3 address of the manager node.

43. (~~Original~~) (Currently amended) The method according to claim 28, wherein conveying the messages comprises conveying an indication of a strength of ~~the~~ an uplink signal, conveying the uplink packet, received respectively by each of the one or more of the access points, and wherein processing the messages comprises selecting at the manager node, responsively to the indication and prior to receiving the messages from all of the one or more of the access points, the one of the access points to respond to the uplink ~~signal~~ packet.

44. (Original) The method according to claim 43, wherein conveying the indication comprises setting, responsively to the strength of the uplink signal, a priority indicator in the messages to be conveyed over the LAN so as to cause the switch to deliver a first message indicating a strong uplink signal before delivering a second message indicating a weak uplink signal.

45. (Original) The method according to claim 43, wherein conveying the indication comprises delaying, responsively to the strength of the uplink signal, transmission of some of the messages, so that a first message indicating a strong uplink signal is transmitted with a smaller delay than a second message indicating a weak uplink signal.

46. (Currently amended) A method for mobile communication, comprising:  
coupling a manager node to first and second ports among a plurality of ports of a switch in a wired local area network (LAN);  
arranging a plurality of access points in a wireless local area network (WLAN) to communicate over the air with a mobile station;

receiving at one or more of the access points an uplink message transmitted over the WLAN by the mobile station, the uplink message containing a destination address;  
passing the uplink message from the one or more of the access points over the LAN to the manager node via the first port of the switch, which is configured to receive uplink messages from the access points exclusively through the first port; and  
conveying the uplink message from the manager node via the second port over the LAN to the destination address, wherein the switch is configured to convey the uplink messages to respective destination addresses exclusively via the second port.

47. (Original) The method according to claim 46, wherein arranging the plurality of the access points comprises configuring the access points to communicate over the LAN exclusively with the manager node via the first port in response to uplink messages received from the mobile station.

48. (Original) The method according to claim 46, wherein arranging the plurality of the access points comprises arranging the access points to communicate with the mobile station substantially in accordance with IEEE Standard 802.11.

49. (Original) The method according to claim 46, wherein coupling the manager node comprises assigning to the manager node first and second addresses on the LAN, which are respectively associated with the first and second ports, and wherein passing the uplink message comprises sending the uplink message over the LAN in the form of one or more data frames directed to the first address.

50. (Original) The method according to claim 49, wherein the uplink message comprises an uplink data packet, and wherein passing the uplink message comprises fragmenting the upstream data packet among a succession of the data frames for conveyance over the LAN to the MAC address, and wherein conveying the uplink message comprises reassembling the data packet from the succession of the data frames, and conveying the reassembled packet via the second port over the LAN to the destination address, using the second address as a source address.

51. (Original) The method according to claim 50, wherein fragmenting the uplink data packet comprises generating the data frames with a length that is no more than 10% of a maximum frame length permitted on the LAN.

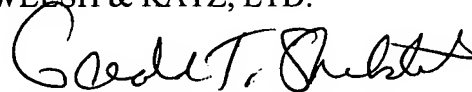


52. (Original) The method according to claim 50, wherein fragmenting the uplink data packet comprises generating the data frames with a length that is equal to a minimum frame length permitted on the LAN.

53. (Original) The method according to claim 50, wherein the address of the manager node on the LAN comprises a Layer 3 address, and wherein each of the succession of the data frames among which the uplink data packet is fragmented comprises a Layer 3 encapsulating packet, which is addressed to the Layer 3 address of the manager node.

54. (Original) The method according to claim 46, and comprising:  
receiving at the manager node a downlink message from the LAN via the second port;  
conveying the downlink message via the first port from the manager node to one of the access points; and  
transmitting the downlink message over the WLAN from the one of the access points to the mobile station.

Respectfully submitted,  
WELSH & KATZ, LTD.



Gerald T. Shekleton  
Reg. No.: 27,466

WELSH & KATZ, LTD  
120 South Riverside Plaza, 22<sup>nd</sup> Floor  
Chicago, Illinois 60606  
Telephone: 312 655-1500



# UNITED STATES PATENT AND TRADEMARK OFFICE



91366  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/764,963

01/26/2004

Shpak Eran

91366

9322

24628 7590 06/05/2007  
WELSH & KATZ, LTD  
120 S RIVERSIDE PLAZA  
22ND FLOOR  
CHICAGO, IL 60606

EXAMINER

BRANDT, CHRISTOPHER M

ART UNIT

PAPER NUMBER

2617

MAIL DATE

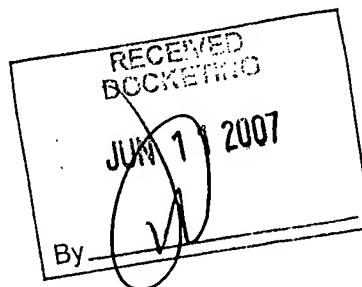
DELIVERY MODE

06/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



RECEIVED  
2007 JUN 11 AM 9:55  
WELSH & KATZ, LTD

# **Notice of Non-Compliant Amendment (37 CFR 1.121)**

JUN 18 2007

Application No.

10764963

Examiner

Applicant(s)

Art Unit

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 16 May 2007 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other \_\_\_\_\_.
- ☐ 2. Abstract:
  - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other \_\_\_\_\_.
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other \_\_\_\_\_.
- ☒ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: Claim 43 status identifier is incorrect.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

## TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment, an amendment filed after allowance, or a drawing submission (only). If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a Quayle action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

**Extensions of time** are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action.

**Failure to timely respond** to this notice will result in:

**Abandonment** of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action; or

**Non-entry** of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

/Marquetta McGee/

Legal Instruments Examiner (LIE), if applicable

571-272-2956

Telephone No.